project WEB

winter 2001

Connecting Projects WILD, WET and Learning Tree in New Hampshire

WE'RE GOING OUTDOORS!

With all of the pressure on today's educators to teach more with less time, the inclination might be to give up on outdoor field trips. While this may provide more time in the classroom, the benefits that students receive from such outdoor experiences may be lost.

The most fundamental reason for teaching outdoors whenever possible is to provide a real-life, first-hand context for the subject matter. Even students that seem to be able to clearly diagram a food chain on paper may not truly understand the role of decomposers until they've rolled over a decaying log and picked away at the decaying material with their fingernails or gotten their hands dirty inspecting the fungus, centipedes, and other insects found there.

In addition to providing first-hand experiences for students, going outdoors can offer unique opportunities for students with different learning styles or interests to excel. Teachers often find that students that might not necessarily shine within the classroom walls can emerge as "experts" to their classmates when the subject is turned to the outdoors. For instance, an average student that never seems to speak up in class (but who has a passion for fishing) may suddenly appear to be the class genius when the group sets out on a day of pond or wetland explorations.

This issue of the Project WEB focuses on going outdoors with your students. Within these pages you'll find instructions, resources, and tips that will, we hope, help make your outdoor experiences fun, safe, and productive for you and your students. Happy field-tripping! ●WEB

IN THIS ISSUE

Managing the Outdoor Experience

The transition from indoors to outdoors is sometimes difficult for students and teachers. We, therefore, suggest that you ease into the outdoors and not attempt to do too much at first. For instance, the first outing may establish only that learning can take place beyond the building and that discipline can be maintained. Initially, your goal should also be establishing a comfortable feeling for the outdoors.

Set Limits

Going outdoors should be fun for students. Consequently, students will talk louder, run farther, and pay less attention to directions than they do indoors. But that energetic "outdoor behavior" can be channeled into constructive learning activities. To do this you will need to establish parameters for their behavior. Be clear about your

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"Whatever befalls the earth befalls the sons and daughters of the earth.
We did not weave the web of life;
We are merely a strand in it.
Whatever we do to the web, we do to ourselves..."
- Chief Seattle

Thirteen Things To Do When Things Go Wrong ...

1. Move close to or walk with a disruptive student.

2. Ignore some antics. Some students will be disruptive just for attention. Responding to them, in a positive or negative way, only reinforces their behavior. It's okay to ignore some behaviors, as long as they are not harmful.

3. Use non-verbal signals, such as a nod, raised brow, or moving close to a student to prevent misbehavior from escalating.

4. Use kind humor (not sarcasm) to lessen a child's anxiety.

5. Give individualized attention to students having trouble with a task, before frustration leads to misadventure.

6. Try a new activity to break up restlessness or boredom.

7. Praise good behavior.

8. Use a firm "no" to enforce safe limits.

9. Have a disruptive student sit down or leave the group. This serves as an opportunity for the student to calm down. Talk to the student about his or her disruptive behavior before inviting him or her to return to the group.

10. Stop the activity and review the rules with the whole group. Ask the students to state the rules and the consequences.

11. Enforce the consequences for misbehavior.

12. Do not hesitate to ask for help from another adult.

13. Keep up your enthusiasm. Remember tomorrow is another day!

Collecting Plants and Animals

The best way to study our natural environment is right where it exists -- in the out-of-doors. Students are able to interpret much about a particular plant or animal from its surroundings. In addition, studying plants and animals in their natural environments allows you to model a respectful and responsible ethic for outdoor behavior. Students will learn to respect all living things, to understand that organisms are best studied without interference from observers, and to appreciate the cumulative impact on a natural area if all visitors collect something from it. Finally, by studying nature in its place, you focus the activity on understanding ecological concepts rather than the act of collecting organisms.

Students participate in hands-on study of the natural environment.

If you must collect organisms…

In limited circumstances, it may be appropriate to collect plants and animals for study in your classroom. It is important to establish guidelines for such collection. Involving students in developing these guidelines is recommended. Address such issues as what and how much will be collected, how will the plant or animal be handled while in your custody, how and when will it be returned to its original home, and how will students limit their impact on the site.

The following are essential rules for the collection of plants and animals.

• Receive permission from the landowner before collecting any materials. It is unlawful to collect materials from national and state parks.

• Never collect rare or endangered species. Contact the NH Fish and Game Department Nongame and Endangered Species program or visit their website at: www.wildlife.state.nh.us.

• Never collect a plant if it is the only one growing at your collection site.

• Minimize the number of organisms you collect.

• Plan for how you will care for any organisms you collect. Make animals as comfortable as possible and provide for basic needs. Provide items under which they can hide.

• Place all organisms in containers away from direct sunlight.

• If it is necessary to handle animals, be gentle. Know that some animals bite to protect themselves. Many amphibians have protective coatings than can be damaged by human touch.

• If aquatic animals are collected, use water from the area where they were collected. Replenish with cool fresh water from this site.

• Return all organisms to the spot they were found as soon as observations are complete. WEB

Adapted from Project Learning Tree PreK-8 Activity Guide and Project WILD K-12 Curriculum and Activity Guide.

Testimonials

Following are comments from a few teachers who regularly use the outdoors as a classroom:

It's hard to teach about the natural world without getting out in the natural world. That's where it's all happening. That's where student excitement and teachable moments come on strong. Kids spend way too much time indoors as it is. Why incarcerate them from 8 to 3 everyday? They'll love it, they'll learn, and they'll always remember you as the teacher who took them outside.

- Nelson Lebo, Proctor Academy

A well managed class outside is most exciting and most rewarding for the students and the teachers involved. I have found the lessons done outside are very productive. Students become engaged and interested in the subject matter, which results in a better product for assessment.

We have just completed a tree population study as part of "River Camp." The students worked with density, species identification, forest age, frequency charts, and bar graphs as some of the skills developed in this unit.

"I have found the lessons done outside are very productive. Students become engaged and interested in the subject matter..."

Words of caution:

1. Practice going outside with your class by taking short walks. Talk with them about expectations.

2. Make sure the office and the nurse are aware of your plan, time, and students' medical concerns.

3. Make arrangements to house students that misbehave. Find another teacher who is willing to care for such people, or perhaps your office personnel will help.

- Larry Boucher, Merrimack Valley Middle School

The Outdoor Classroom at Hampstead Middle School is a hilly, forested area and a short hike from my classroom. Upon returning to the school building, I always "debrief" our experiences with my language arts, literature or science students. They never fail to mention that the outdoor environment provides them with a different academic perspective and a welcome change in routine. They feel energized and are more willing to fully focus on writing, practicing choral poetry, taking a spelling test, or exploring environmental science.

I have been taking kids of all ages outside to learn for about 20 years now, and their enthusiasm and the educational benefits far outweigh any of the glitches. A majority of the kids that I teach are kinesthetic and visual learners and the outdoor arena is perfectly suited to their learning style. They easily retain the concepts taught in that setting!

- Kathe Cussen, Hampstead Middle School

Activities Related to Articles in This Issue

Project Learning Tree Suggests

In *Planet of Plenty*, students pretend they are visiting Earth from another planet for the first time and must describe, in detail, all the life they find in a small plot of land.

Nothing Succeeds Like Succession! allows students to learn the essential concept of natural succession by studying the connections between plants and animals in test plots at different stages of succession.

By *Looking at Leaves*, students learn to identify trees by all the differences in their leaves, including shape, size, margins, and arrangement on the branch.

Project WILD Suggests

Field trips are a great time to do Project WILD activities to help meet your objectives.

If you're studying wildlife populations, field trips to different habitats will allow you to compare the presence of different birds through the use of *Bird Song Survey*.

Water Canaries provides a hands-on way for students to explore the quality of streams and ponds.

There is nothing like going on a field trip in the winter to be able to observe *Tracks*.

Project WET Suggests

In *Wetland Soils in Living Color*, a field trip to a wetland gives students first-hand experience with what wetland soils look like and how they are classified.

Macroinvertebrate Mayhem wraps up with a trip to a stream, where students collect macroinvertebrate samples to better understand the habitat of these organisms.

Students go outdoors and collect data to learn about transpiration in *Thirsty Plants*.

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behavioral expectations for the group, but be sure your expectations are reasonable. You cannot expect children to remain silent while catching tadpoles in a pond. You can, however, expect them to lower their voices while walking by the open windows of classes in session.

Outdoor activities often require students to be dispersed over large areas. Having an extra adult or two will help. During hikes or neighborhood walks, the group should stay together. Assigning one adult to the front of the line and one to the end helps ensure that this happens.

You will also need to maintain geographic boundaries during activities where students are set free to conduct a task. Borders should be visible from the activity's starting place. It is likely that your students will want to go to the limits of your boundaries, so be sure they are close enough to get back in the time allotted.

Having all the equipment for an activity in one container makes it easy for students to quickly become engaged.

Structured Activities

One of the best ways to maintain control outdoors is to keep the students involved in structured activities. When students are busy with interesting investigations, they have less time and inclination to get into trouble. Whether working independently or in groups, each student should have a specific job to do that contributes to the learning experience of the class and that keeps the student occupied for the time you have budgeted.

Another way to help track your students (both how they are using their time and where they physically are) is to set separate time limits for each phase of the activity, so that students are checking in at relatively frequent intervals.

Using Grouping and Cooperative Learning

Many outdoor activities are successful if done by students working in small groups. There are often so many small tasks that no one student could accomplish them all. By dividing the tasks among the group members, the activities can take less time. Since many students may feel less confident when away from the security of their classroom, working in groups can provide them with a built-in support system; no student is totally responsible for any one assignment.

To have group activities run smoothly, you need to select the members of each group carefully, in advance of the lesson. For activities in which each group member has a different task, avoid putting all the students with the same skill together in one group. However, during activities in which the whole group has one collective job to do, you might want to let friends work together.

For cooperative group assignments, be sure that all students understand their particular roles. Encourage group members to listen to and help one another.

Safety

The safety and health of the students should be a primary concern in all outdoor situations. While there can be no guaranteed measures that will protect all of your students all of the time, there are some steps you can take to prevent many mishaps.

Survey the study area before arriving with your group. Look for such hazards as poisonous and stinging plants and insects, loose rocks, rotten boardwalks, and traffic. If these things are present, discuss with the students in advance how they can avoid them.

OUTDOOR EXPERIENCE *continued on next page*

Plan Before the Outdoor Experience

Choose the Activity

- ✓Decide what you will teach.
- ✓What are your objectives?

Check Out the Site

- ✓Do the regulations of the area permit the activities you want to do?
- ✓Is the site an appropriate size?
- ✓Are there clear-cut boundaries that your students will respect as their "outer limits?"
- ✓Are restrooms and first-aid facilities accessible?
- ✓Are there any potential safety hazards? Can they be avoided?

Plan the Activity

- ✓Write out the lesson plan.
- ✓Review every step.
- ✓Estimate how much time you will spend.
- ✓Make a complete list of materials you will need.
- ✓Tell students what to wear.
- ✓Send out permission slips.

Prepare Your Students

- ✓Know their current knowledge level.
- ✓Review the planned activities with the class.
- ✓Make clear the purpose of the trip.
- ✓Give as many instructions as possible before going outdoors.

OUTDOOR EXPERIENCE *continued from previous page*

Whenever possible, exclude these hazards when you are establishing activity boundaries. To prevent students from getting lost in large areas, orient them with reference landmarks and assign each student a "buddy" to be responsible for during the outing.

Finally, take a first-aid kit on all outings away from the schoolyard and know how to use it. Many educators today are opting to take a cell phone with them should an emergency arise. If this is not an option for you, be sure to locate the nearest place you could get help if a crisis arose and decide who will take charge if you become incapacitated. ●WEB

Adapted from Addison -Wesley Science Outdoor Education Guide For Teachers.

Using equipment helps to focus the students' attention.

Mark Your Calendar!

March 29 and April 10 – Two - part schoolyard habitat workshop at Beaver Brook, Hollis, NH. For information, call 465-7787.

April 7 – Project WET workshop at Beaver Brook, Hollis, NH. Contact Nicole Clegg at 271-4071.

April 19 – NH Environmental Educators Annual Meeting. For more information contact Nicole Clegg at 271-4071.

April 21 – Discover WILD New Hampshire Day, a fun-filled day for the whole family to learn about the Granite State's fish, wildlife and other natural resources. Dozens of exhibitors and activities. Free event runs from 10 a.m. to 3 p.m. at Fish and Game Department headquarters, 2 Hazen Drive, Concord, NH. For information, call 271-3211; or visit: www.wildlife.state.nh.us.

May 5 – Fabulous Fishways Carnival, Amoskeag Fishways, Manchester, NH. For more information, contact the Fishways at 626-FISH.

ANNOUNCEMENTS

Scholarship and Workshop Bolster Green Education Projects

Enter a $1,000 workshop scholarship drawing. Unique, active, and fun!

The AMAZON Rainforest Workshop July 5-13, 2001, is an immersion experience designed to develop teachers' environmental leadership skills.

- Join author/illustrator Lynne Cherry and a spirited faculty.
- Work side-by-side with researchers of ornithology, botany, marine biology, and entomology in one of the most biologically diverse environments in the world.
- Integrate field study with slides and support materials as a catalyst for local environmental education projects at home.
- Receive academic credit.

Full land cost of the workshop is $1,898. Budget airfares, optional Andes extensions are available. Scholarship deadline is April 2. Call Frances Gatz at 800-669-6806, email: fgatz@earthlink.net, or check the web site: www.travel2learn.com.

NH Project WET is pleased to announce that a major revision of its website (www.des.state.nh.us/wet/) is now complete. The new site offers resources for different audiences, including those who have already been trained in Project WET. Highlights of the site for those already trained in WET include:

- On-line resources correlated to all 91 Project WET activities, providing additional background information and related activities to help you conduct Project WET activities.
- An instant activity finder allows you to put in your search criteria (grade level, subject area, topic, setting, etc.) and find a Project WET activity to meet your needs, rather than search through the reference charts in the back of the guide.
- On-line correlations of all Project WET activities to the NH Curriculum Frameworks.

All of these and much more can be found at: www.des.state.nh.us/wet/. Once there, choose which audience you belong to: those already trained in WET, those who would like to be trained, NH WET facilitators, and/or NH WET advisory committee members.

Looking for NH Project Learning Tree on the Web?

You can now find us at: www.nhplt.org.

Environmental Education Institute: Watershed Ecology Course

(offered subject to final approval)
Co-Sponsors: NH Fish & Game Dept., UNH Cooperative Extension, NH Audubon Society, NH Environmental Educators
Location: TBA
Dates: July 23 – August 3 2001 (10 days)
Times: 8:30 a.m. - 4 p.m.
Credit optional (2 credits)
Who should apply: Secondary science educators and other interested individuals.

The course will prepare teachers to take advantage of the outdoor classroom and meet state standards. Materials and excellent background knowledge are shared by some of the best environmental educators in the state. This hands-on course will provide secondary science educators and other interested individuals with an understanding of watershed ecology. Participants will receive a collection of outdoor and classroom activities that tie together the watershed concept for their students. Topics include wetlands, streams and lakes, groundwater, plant communities, forest ecology, estuarine and marine ecology, and wildlife. Each day will include a classroom and field component.

For more information contact:
AQUATIC RESOURCES EDUCATION
NH FISH AND GAME DEPARTMENT
2 Hazen Dr.
Concord, NH 03301
271-3212
aquaticed@wildlife.state.nh.us.

National Wildlife Week 2001: April 16-22

This year's theme for the National Wildlife Federation's annual National Wildlife Week is *Exploring Nature in Your Neighborhood.* For a variety of activities, go online at: www.nwf.org/wildlifeweek/.

Take a Fresh Look at Our Revised Website!

www.des.state.nh.us/wet/

ON THE

H.O.M.E. FRONT

Field Tripping in your Own Schoolyard

BY MARILYN WYZGA

When field trip funds are running low, consider taking a look at the rich resources right around you. What could be closer than your own schoolyard? It may not seem exciting or exotic, but you'll be pleasantly surprised to find many interesting things out there. Bring your curriculum outdoors, and investigate the school grounds with your students.

In *Ten-Minute Field Trips*, Helen Ross Russell remarks, "Short close-to-home field trips are essential for understanding the environment… the area surrounding the school is by far the best starting point." She continues, "Temperature changes, precipitation, air currents, pollution, the forces of disintegration and decomposition, plant and animal relationships, and people relationships are things that occur everywhere… This means that the best possible facilities for teaching environmental studies are available to all schools." You can follow Ms. Russell's lead and use your site as it is. Or you may choose to explore and inventory its features while planning to enhance it, or establish an outdoor classroom with learning lab features.

I recently saw a surprising example of using simple materials to increase the interest of a site. At a symposium I attended in December, Ginny Sullivan, of *Learning by the Yard*, shared a video from England, entitled "The Experimental Playground." On a London schoolyard, which was entirely paved, two artists conducted a boldly unique residency program. Each day for five days, they introduced new elements to the area. Day one, they provided chalk; day two, highway cones; day three, carpet-covered platforms. On the fourth day, they enclosed an outdoor shed with black fabric, and filled it with theater lights. Each child was given plastic chips in different colors, which they exposed to the lights to see how color mixes and changes. On the last day, the platforms and cones returned.

A stream on the Newmarket School site provides a field trip destination, and a rich resource for students studying water quality.

Seventh graders at North Hampton School use their nature trail to explore challenges in group dynamics.

What was astonishing about this simple maneuver was how simply changing the texture, color, or height of the grounds altered the children's behaviors, attitudes, and explorations. Throughout the week, the artist team filmed and interviewed the students interacting with the materials, the site, and each other. This information will be gathered into a design for transforming the schoolyard into one that is conducive to creative exploration, investigation, and play.

Here in New Hampshire, an outdoor learning park is in production at the Bedford Memorial School, with teacher Leslie Fredette heading

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up the effort for grades 1-5. With a grant from the NH State Council on the Arts, the school is hosting an artist residency with Laura Campbell, a Peterborough landscape architect. Laura is working with each grade to teach them the particulars of landscape architecture and design. They have each chosen a curriculum around which to design a feature in the learning park. Five stations will be built this spring, covering topics from butterflies to birds and bats. Even compost will be presented as "aesthetically pleasing."

Ready to head outside with your students? If you've never done so before, anticipate that they may treat it like recess. Start small. Project WILD's "Learning to Look; Looking to See" is a good activity for focusing students' attention. As you progress, assemble a kit of simple teaching tools. Make sure your directions for studies or tasks are specific and broken down into parts. *Homes for Wildlife* includes a series of inventory cards that can guide your exploration of the grounds. Think seasonally, multisensory, and across the curriculum.

For a list of recommended tools to include in an outdoor classroom kit, contact: Marilyn Wyzga, Project HOME coordinator, at mwyzga@wildlife.state.nh.us or call 271-3211.

The wooded area behind North Hampton School provides the resources to practice survival skills and shelter building.

RESOURCES FOR SCHOOLYARD FIELD TRIPS:

Jenepher Linglebach, *Hands on Nature*, UNIVERSITY PRESS OF NEW ENGLAND, Hanover, NH; 2000

Helen Ross Russell, *Ten Minute Field Trips*, NATIONAL SCIENCE TEACHERS ASSOCIATION, Washington, D.C.; 1990

Marilyn Wyzga, *Homes for Wildlife*, NH FISH & GAME DEPARTMENT, Concord, NH; 1998

Project WILD receives Federal financial assistance from the US Fish and Wildlife Service. Under Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972. The US Department of the Interior and its bureaus prohibit discrimination on the basis of race, color, national origin, age, disability, religion or sex (in educational programs). If you believe that you have been discriminated against in any program, activity, or facility, or if you desire additional information please write to:

The US Fish and Wildlife Service
Office for Diversity and Civil Rights Programs – External Affairs
4040 N. Fairfax Drive, Suite 130
Arlington, VA 22203

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